WE CLAIM:

1. A method for delivering a pharmacologically active agent to the upper gastrointestinal tract of a patient over an extended time period while minimizing delivery to the lower gastrointestinal tract and colon, the method comprising orally administering to a patient in whom the fed mode has been induced a sustained release oral dosage form comprised of a therapeutically effective amount of the pharmacologically active agent incorporated in a matrix of at least one biocompatible, hydrophilic polymer that:

(a) swells in the presence of water in gastric fluid such that the size of the dosage form is sufficiently increased to provide gastric retention of the dosage form in the stomach of a patient in whom the fed mode has been induced; and

(b) gradually erodes within the gastrointestinal tract over a determinable time period,

wherein the ratio of the erosion rate ER obtained *in vitro* for the dosage form using USP disintegration test equipment to the dissolution rate DR obtained *in vitro* for the dosage form using USP dissolution test equipment is in the range of approximately 1.2:1 to approximately 5:1.

2. The method of claim 1, wherein following oral administration, the dosage form is retained in the upper gastrointestinal tract for a time period of about 2 to 12 hours.

3. The method of claim 2, wherein following oral administration to a patient in the fed mode, the dosage form is retained in the upper gastrointestinal tract for a time period of about 4 to 9 hours.

4. The method of claim 2, wherein at least 75 wt.% of the active agent is released within the time period.

5. The method of claim 4, wherein at least 85 wt.% of the active agent is released within the time period.

6. The method of claim 3, wherein at least 75 wt.% of the active agent is released within the time period.

7. The method of claim 6, wherein at least 85 wt.% of the active agent is released within the time period.

8. The method of claim 2, wherein the therapeutically effective amount of the active agent is in the range of about 0.01% to 80% by volume.

9. The method of claim 8, wherein the therapeutically effective amount of the active agent represents at least 60% of the dosage form by volume.

10. The method of claim 9, wherein the therapeutically effective amount of the active agent represents approximately 60% to 80% of the dosage form by volume.

11. The method of claim 2, wherein the active agent is an antibiotic.

12. The method of claim 11, wherein the active agent is selected from the group consisting of ciprofloxacin, minocycline, and acid addition salts thereof.

13. The method of claim 12, wherein the active agent is ciprofloxacin.

14. The method of claim 12, wherein the active agent is ciprofloxacin hydrochloride.

15. The method of claim 12, wherein the active agent is minocycline.

16. The method of claim 12, wherein the active agent is minocycline hydrochloride.

17. The method of claim 2, wherein the active agent is selected from the group consisting of furosemide, gabapentin, losartan, and budesonide.

18. A method for treating a human patient suffering from a bacterial infection that is responsive to the oral administration of ciprofloxacin, comprising administering the dosage form of claim 1 to the patient for a therapeutically effective time period.

19. The method of claim 18, wherein the dosage form is administered once daily.

20. The method of claim 18, wherein the bacterial infection is infection with mycobacterium avium complex, *Pseudomonas*, *Shigella, Salmonella*, toxigenic *E. coli, Campylobacter*, *Enterobacter*, or *Bacillus anthracis*

21. A method for selecting an optimized controlled release dosage form for administration to a patient such that the dosage form will have a predetermined drug release profile *in vivo*, the method comprising:

(a) preparing a plurality of different candidate dosage forms each comprised of a biocompatible, hydrophilic polymer and a pharmacologically active agent incorporated therein;

(b) obtaining the erosion rate ER *in vitro* for each candidate dosage form using USP disintegration test equipment;

(c) obtaining the dissolution rate DR *in vitro* for each candidate dosage form using USP dissolution test equipment; and

(d) selecting for administration to a patient that dosage form wherein the ratio of ER to DR is in the range of approximately 1.2:1 to approximately 5:1.

22. The method of claim 21, wherein (d) comprises selecting a dosage form having a ratio of ER to DR is in the range of approximately 1.2:1 to approximately 3:1.

23. The method of claim 22, wherein (d) comprises selecting a dosage form having a ratio of ER to DR is in the range of approximately 1.3:1 to approximately 2:1.

24. The method of claim 23, wherein (d) comprises selecting a dosage form having a ratio of ER to DR is in the range of approximately 1.5:1 to approximately 2:1.